

Amendments to the Claims

This listing of claims replaces all prior versions and listings of claims in this application.

Listing of Claims:

Claim 1 (Currently Amended)

A heat sink device used for ball grid array package device with modified embedded heat slug, comprising:

a first heat sink assembly having a first heat dissipating structure, and a second heat dissipating structure, said second heat dissipating structure located below ~~[[on]]~~ said first heat dissipating structure;

a printed circuit board having a ball grid array package device thereon, said ball grid array package device having an embedded heat slug with a cavity thereon; and

a second heat sink assembly having a protruding structure in the center of said second heat sink assembly and at least two ~~through holes~~ openings on the two sides of said second heat sink assembly, wherein said first heat sink assembly is located above said ball grid array package device of said printed circuit board, and said second heat sink assembly is located below said ball grid array package device of said printed circuit board.

Claim 2 Cancelled

Claim 3 (Previously Presented)

The heat sink device used for ball grid array package device with modified embedded heat slug according to Claim 1, wherein said second heat dissipating structure is a heat dissipating fin.

Claim 4 (Currently Amended)

The heat sink device used for ball grid array package device with modified embedded heat slug according to Claim 1, wherein a ~~conductive protruding~~ thermal block is located on ~~[[the]]~~ a backside of said first heat dissipating structure.

Claim 5 (Currently Amended)

The heat sink device used for ball grid array package device with modified embedded heat slug according to Claim 1, wherein a thermal conductive adhesive tape ~~being~~ is located on ~~[[said]]~~ a backside of said first heat dissipating structure.

Claim 6 Cancelled

Claim 7 (Currently Amended)

The heat sink device used for ball grid array package device with modified embedded heat slug according to Claim 1, further comprising a ~~conductive~~ thermal material located between said first heat dissipating structure and said ball grid array package device ~~[[and]]~~ to adhere to said first heat dissipating structure ~~being adhered to~~ and said ball grid array package device.

Claim 8 (Currently Amended)

The heat sink device used for ball grid array package device with modified embedded heat slug according to Claim 1, wherein ~~[[said]]~~ at least said two ~~conductive~~ thermal supports are located below said first heat dissipating structure.

Claim 9 (Currently Amended)

The heat sink device used for ball grid array package device with modified embedded heat slug according to Claim 1, further comprising at least two springs put around at least said two ~~conductive~~ thermal supports.

Claim 10 (Currently Amended)

A heat sink device used for package device with modified embedded heat slug, comprising:
a heat sink assembly ~~[[which]]~~ having a thermal conductive adhesive tape located on a backside of a first heat dissipating structure, and a second heat dissipating structure located above said first heat dissipating structure;

a printed circuit board having ~~[[said]]~~ a package device thereon, ~~wherein~~ said package device having a cavity of an embedded heat slug ~~therein~~; and

a ~~conductive protruding~~ thermal block embedded in said cavity of said package device, wherein said first heat dissipating structure is located above said package device of said printed circuit board, and said ~~conductive protruding~~ thermal block within said cavity of said embedded heat slug is ~~contacted with~~ attached to said backside of said first heat dissipating structure.

Claim 11 Cancelled

Claim 12 (Previously Presented)

The heat sink device used for package device with modified embedded heat slug according to Claim 10, wherein said second heat dissipating structure is a heat-dissipating fin.

Claim 13 (Currently Amended)

The heat sink device used for package device with modified embedded heat slug according to Claim 10, further comprising a ~~conductive~~ thermal material located between said first heat dissipating structure and said package device.

Claim 14 (Currently Amended)

The heat sink device used for package device with modified embedded heat slug according to Claim 10, further comprising a second heat sink assembly located ~~[[below]]~~ under said package device of said printed circuit board.

Claim 15 (Currently Amended)

The heat sink device used for package device with modified embedded heat slug according to Claim 14, ~~wherein~~ said second heat sink assembly having a protruding structure in the center of said second heat sink assembly and at least two ~~through-holes~~ openings on the two sides of said second heat sink assembly.

Claim 16 (Currently Amended)

A heat sink device of package device, comprising:

a first heat sink assembly ~~[[with]]~~ having a first heat dissipating structure, a ~~conductive~~ protruding thermal block located on a backside of said first heat dissipating structure, a second heat dissipating structure located below said first heat dissipating structure, and at least two ~~conductive~~ thermal supports located below said first heat dissipating structure;

a printed circuit board having a package device thereon and having at least two through holes ~~thereon~~; and

a second heat sink assembly having a protruding structure in the center of said second heat sink assembly and at least two ~~through holes~~ openings on the two sides of said second heat sink assembly, wherein said at least two ~~conductive~~ thermal supports of said first heat sink assembly ~~used at least two conductive supports that~~ passed through at least said two through holes of said printed circuit board, and jointed with at least said two ~~through holes~~ openings on said two sides of said second heat sink assembly.

Claim 17 Cancelled

Claim 18 (Previously Presented)

The heat sink device of said package device according to Claim 16, wherein said second heat dissipating structure is a heat-dissipating fin.

Claim 19 (Currently Amended)

The heat sink device of said package device according to Claim 16, further comprising a ~~conductive~~ thermal material ~~full with~~ filled with at least said two through holes of said printed circuit board to connect at least said two through holes with said at least said two ~~conductive~~ thermal supports.

Claim 20 (Currently Amended)

The heat sink device of said package device according to Claim 16, further comprising at least two springs that put around at least said two ~~conductive~~ thermal supports.